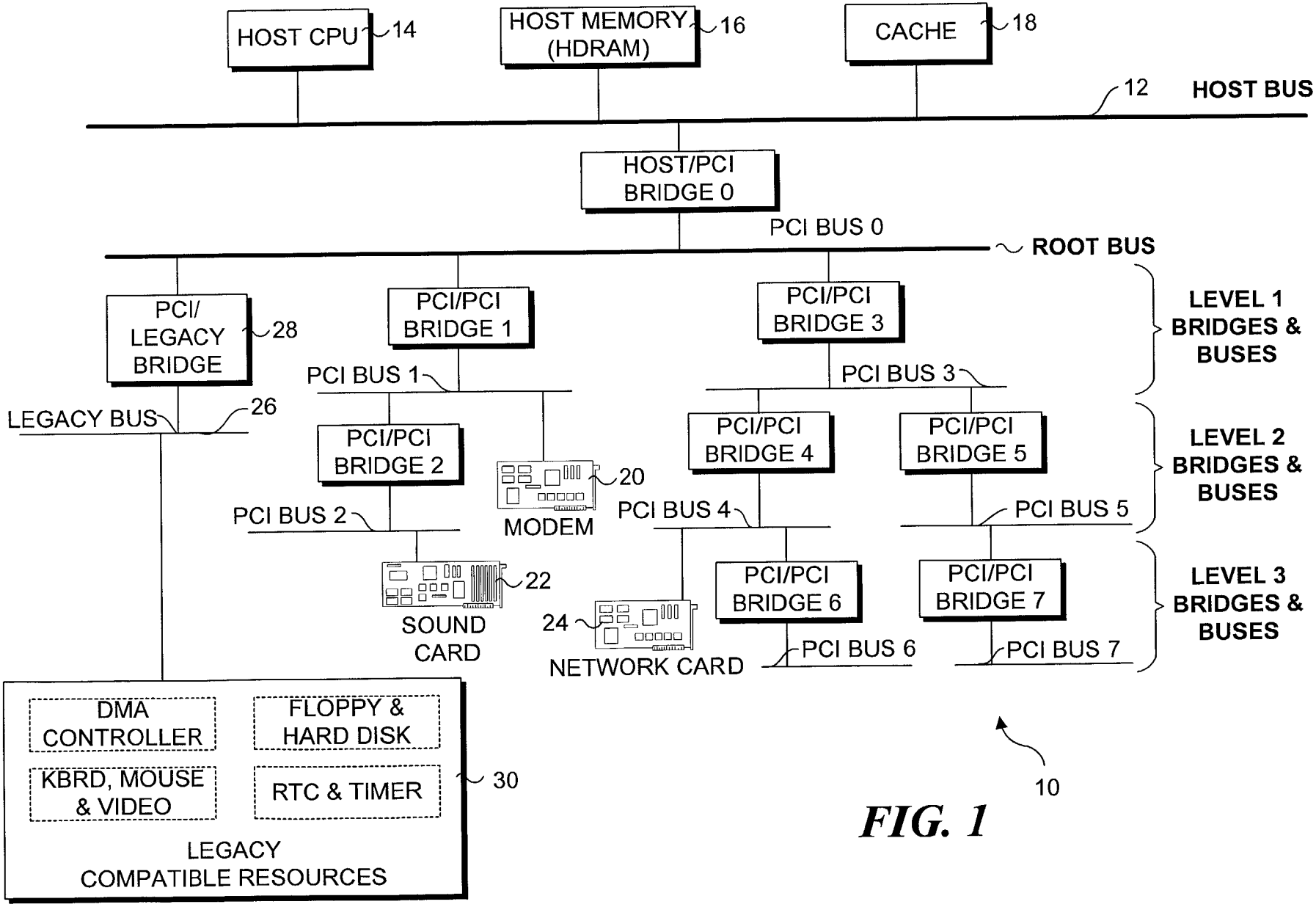

HOST CPU
14
HOST MEMORY (HDRAM)
16
CACHE
18
12
HOST BUS
HOST/PCI BRIDGE 0
PCI BUS 0
ROOT BUS
PCI/ LEGACY BRIDGE
28
PCI/PCI BRIDGE 1
PCI/PCI BRIDGE 3
LEVEL 1 BRIDGES & BUSES
PCI BUS 1
PCI BUS 3
LEGACY BUS
26
PCI/PCI BRIDGE 2
PCI/PCI BRIDGE 4
PCI/PCI BRIDGE 5
LEVEL 2 BRIDGES & BUSES
20
MODEM
PCI BUS 2
PCI BUS 4
PCI BUS 5
22
SOUND CARD
24
NETWORK CARD
PCI/PCI BRIDGE 6
PCI/PCI BRIDGE 7
LEVEL 3 BRIDGES & BUSES
PCI BUS 6
PCI BUS 7
DMA CONTROLLER
FLOPPY & HARD DISK
KBRD, MOUSE & VIDEO
RTC & TIMER
30
LEGACY COMPATIBLE RESOURCES
10

FIG. 1

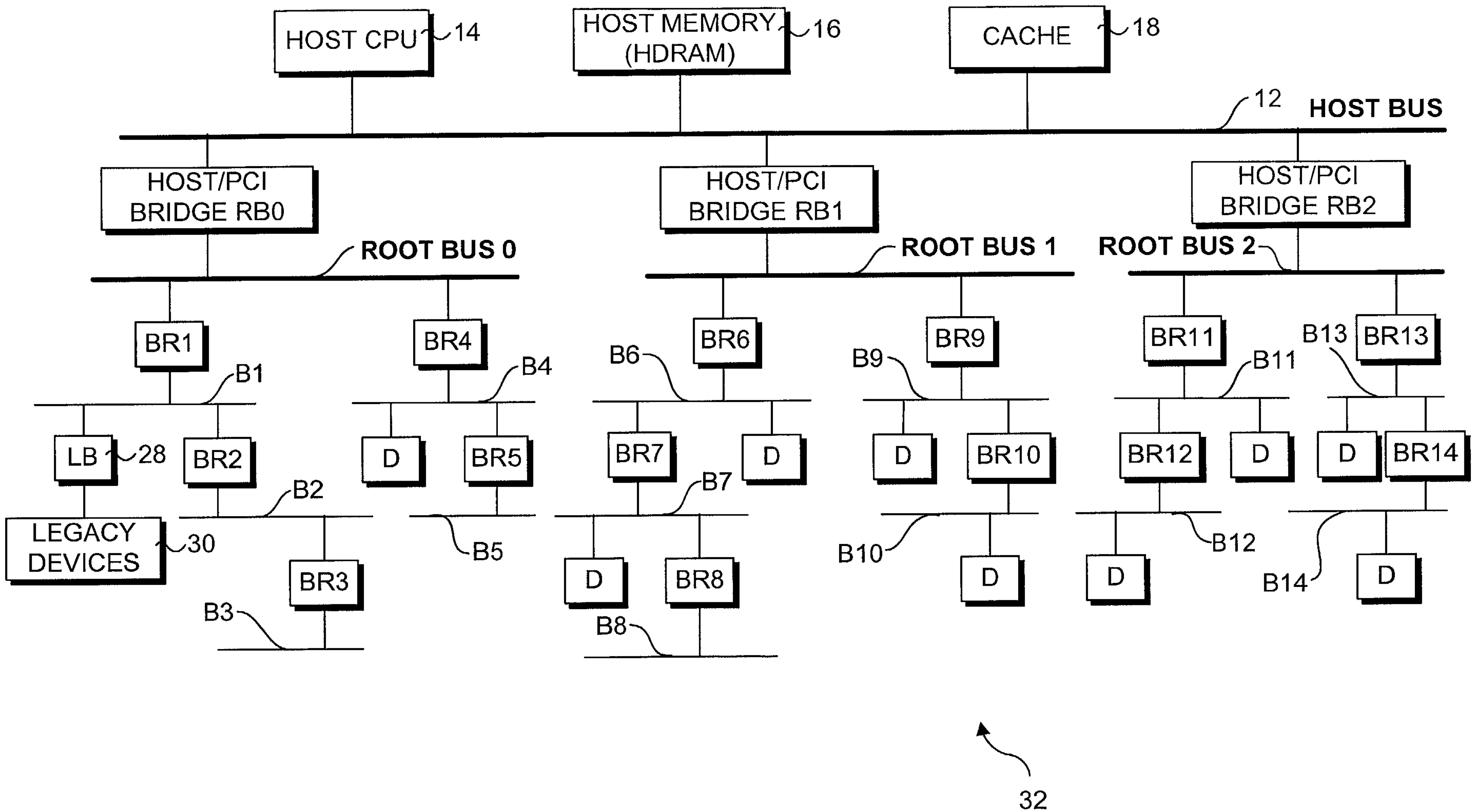

HOST CPU
14
HOST MEMORY (HDRAM)
16
CACHE
18
12
HOST BUS
HOST/PCI BRIDGE RB0
HOST/PCI BRIDGE RB1
HOST/PCI BRIDGE RB2
ROOT BUS 0
ROOT BUS 1
ROOT BUS 2
BR1
BR2
BR3
BR4
BR5
BR6
BR7
BR8
BR9
BR10
BR11
BR12
BR13
BR14
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
LB
28
LEGACY DEVICES
30
D
32

FIG. 2

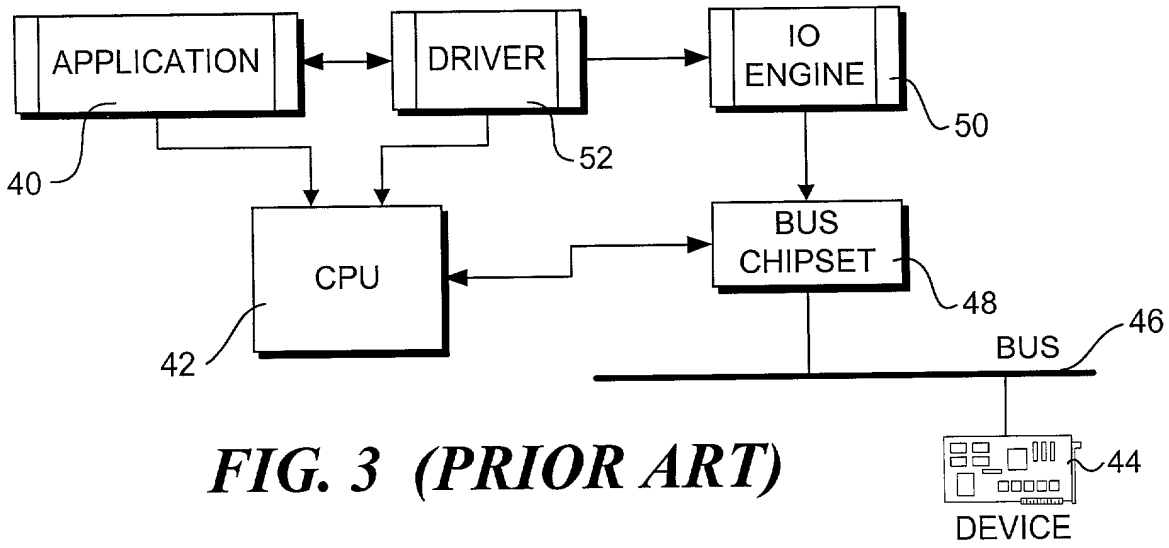


FIG. 3 (PRIOR ART)

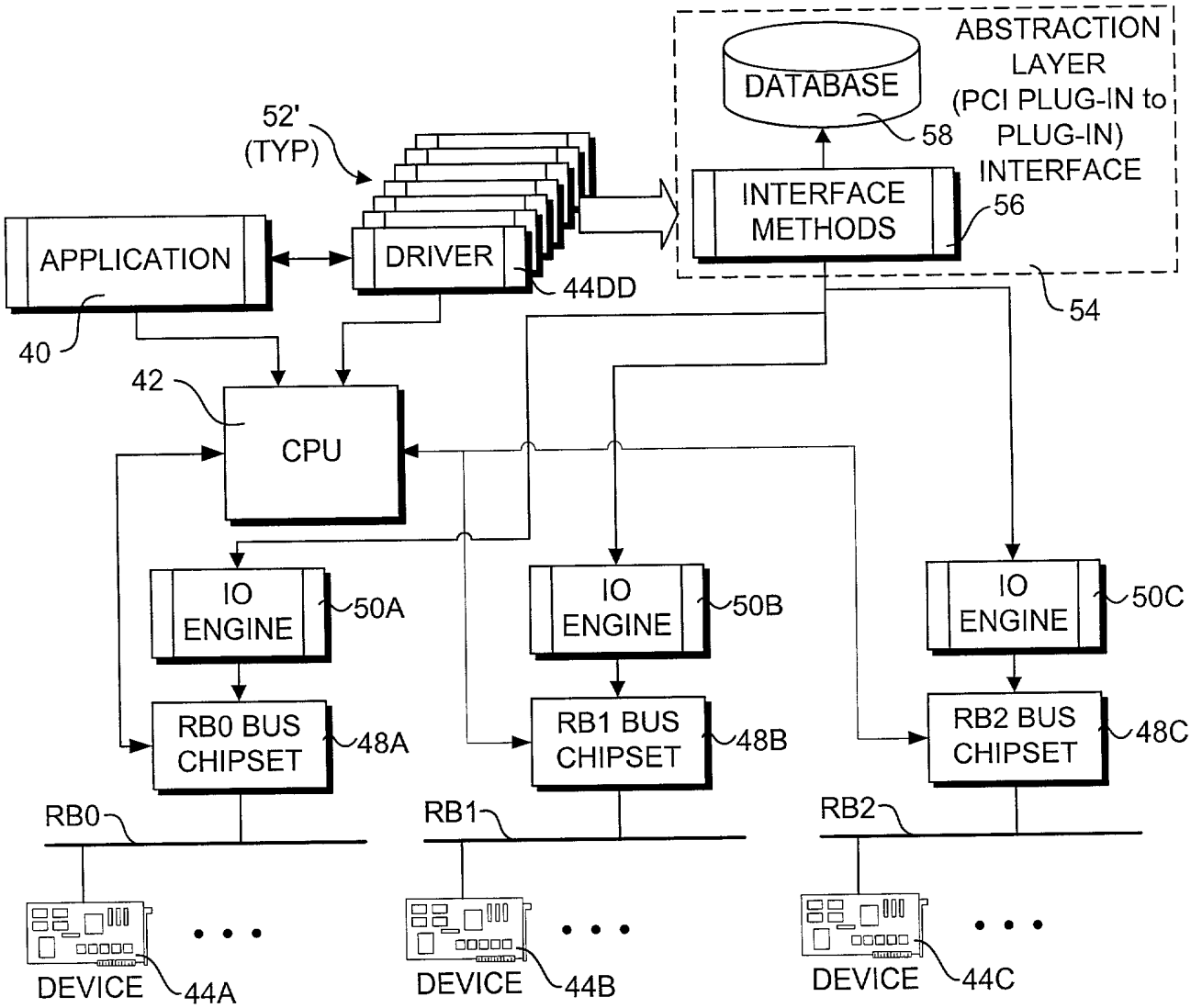


FIG. 4

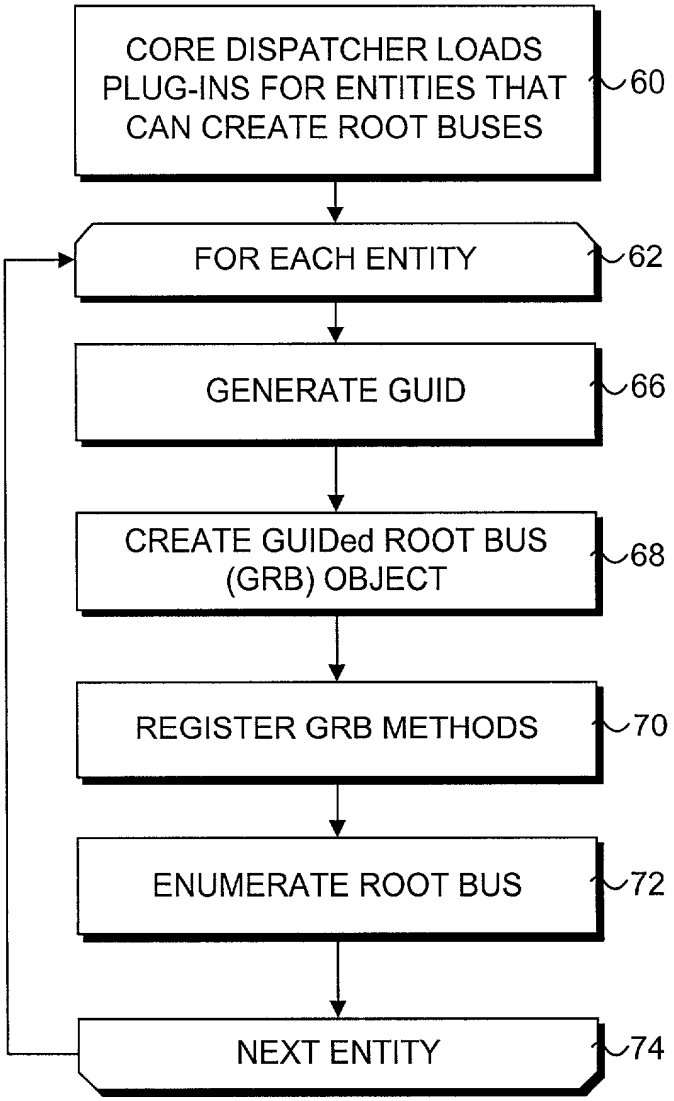
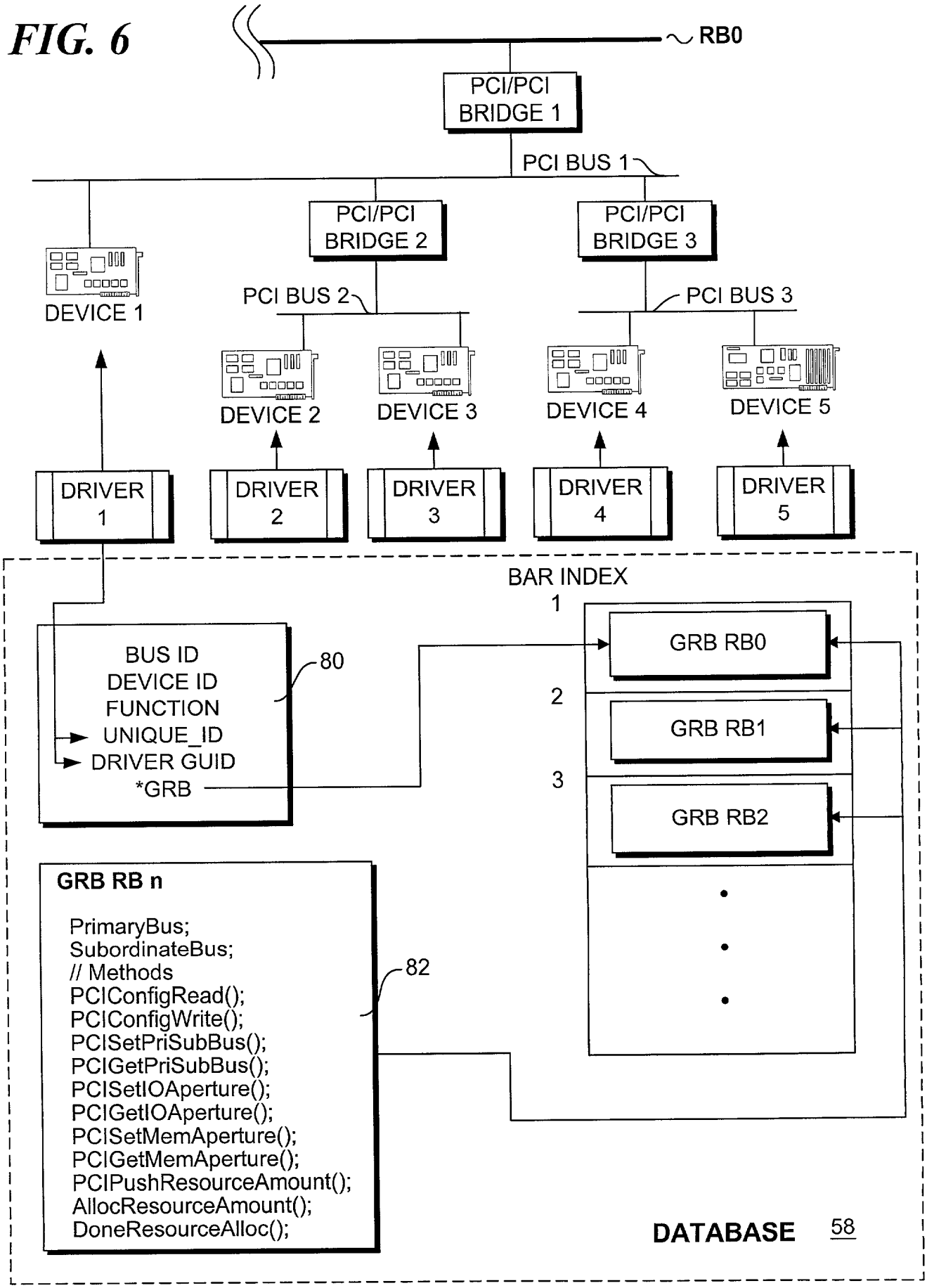

CORE DISPATCHER LOADS PLUG-INS FOR ENTITIES THAT CAN CREATE ROOT BUSES
60
FOR EACH ENTITY
62
GENERATE GUID
66
CREATE GUIDed ROOT BUS (GRB) OBJECT
68
REGISTER GRB METHODS
70
ENUMERATE ROOT BUS
72
NEXT ENTITY
74

FIG. 5

FIG. 6


RB0
PCI/PCI BRIDGE 1
PCI BUS 1
PCI/PCI BRIDGE 2
PCI/PCI BRIDGE 3
DEVICE 1
PCI BUS 2
PCI BUS 3
DEVICE 2
DEVICE 3
DEVICE 4
DEVICE 5
DRIVER 1
DRIVER 2
DRIVER 3
DRIVER 4
DRIVER 5
BAR INDEX
1
2
3
BUS ID
DEVICE ID
FUNCTION
UNIQUE_ID
DRIVER GUID
*GRB
80
GRB RB0
GRB RB1
GRB RB2
GRB RB n
PrimaryBus;
SubordinateBus;
// Methods
PCIConfigRead();
PCIConfigWrite();
PCISetPriSubBus();
PCIGetPriSubBus();
PCISetIOAperture();
PCIGetIOAperture();
PCISetMemAperture();
PCIGetMemAperture();
PCIPushResourceAmount();
AllocResourceAmount();
DoneResourceAlloc();
82
DATABASE 58

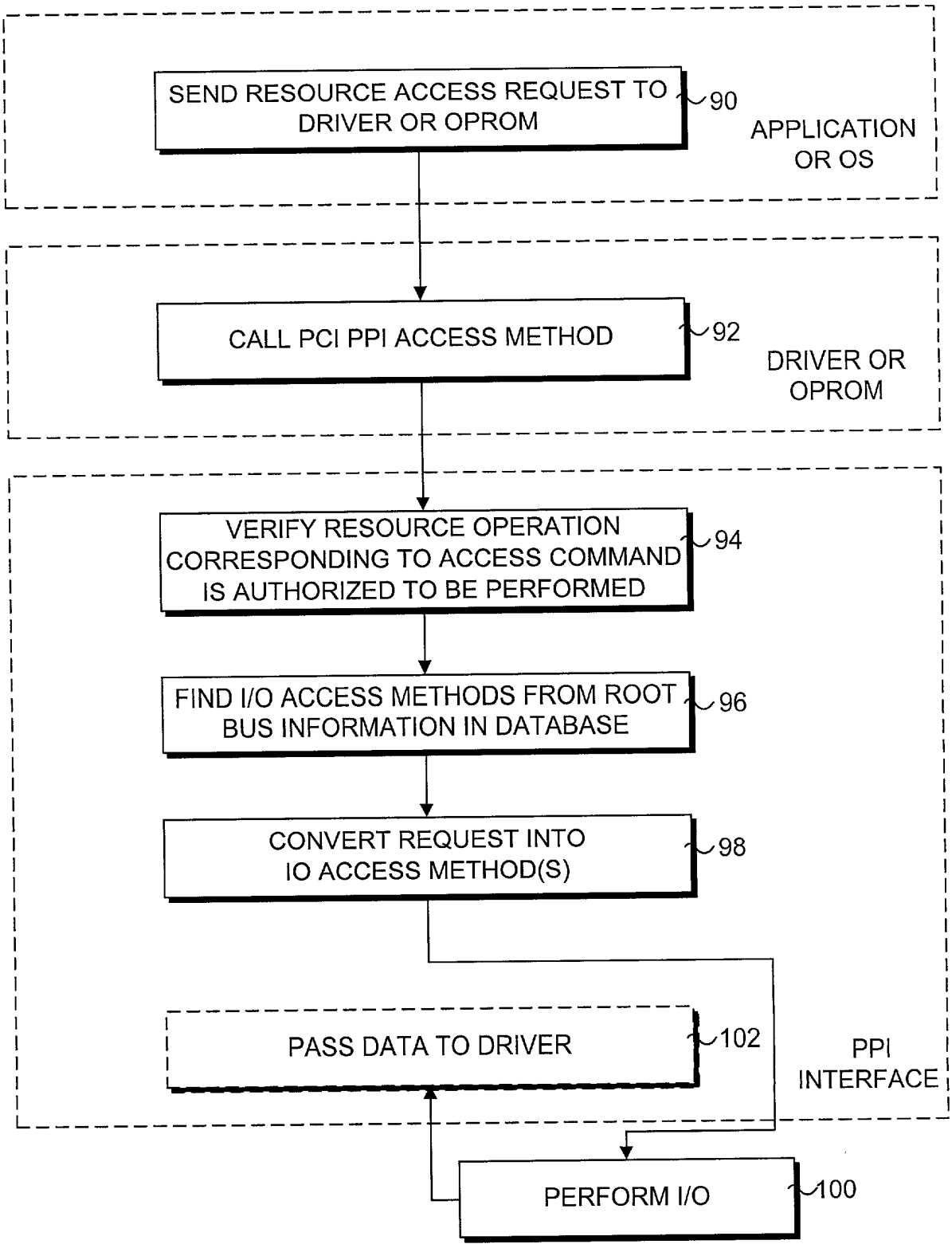

SEND RESOURCE ACCESS REQUEST TO DRIVER OR OPROM
90
APPLICATION OR OS
CALL PCI PPI ACCESS METHOD
92
DRIVER OR OPROM
VERIFY RESOURCE OPERATION CORRESPONDING TO ACCESS COMMAND IS AUTHORIZED TO BE PERFORMED
94
FIND I/O ACCESS METHODS FROM ROOT BUS INFORMATION IN DATABASE
96
CONVERT REQUEST INTO IO ACCESS METHOD(S)
98
PASS DATA TO DRIVER
102
PPI INTERFACE
PERFORM I/O
100

FIG. 7

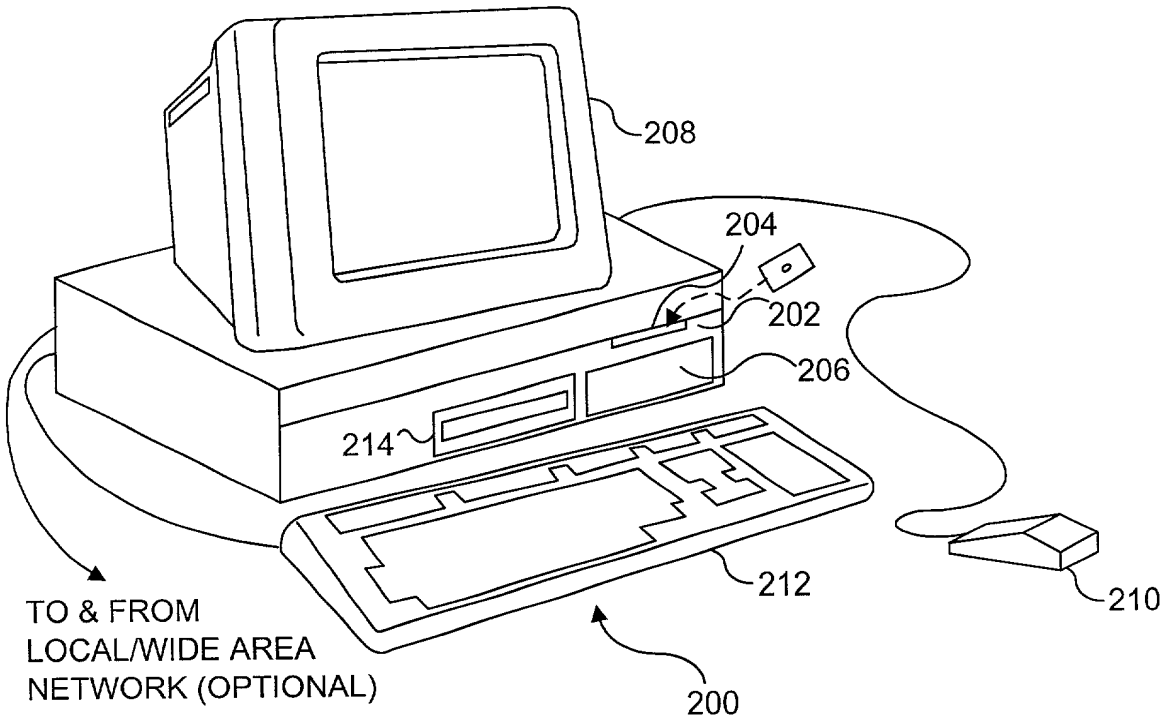

208
204
202
206
214
212
210
TO & FROM
LOCAL/WIDE AREA
NETWORK (OPTIONAL)
200

FIG. 8